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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/741,539	12/19/2003	Farid Nemati	2000.010.00/US	4650

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WALTER D. FIELDS
FIELDS IP, PS
601 MAIN STREET
SUITE 405
VANCOUVER, WA 98660

EXAMINER	
DANG, PHUC T	

ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/741,539	NEMATI ET AL.
	Examiner	Art Unit
	PHUC T. DANG	2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment filed on August 15, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *12-26* is/are withdrawn from consideration.

5)☒ Claim(s) *8-11* is/are allowed.

6)☒ Claim(s) *1,2 and 27* is/are rejected.

7)☒ Claim(s) *3-7 and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The indicated allowability of claims 1-11 are withdrawn in view of the newly discovered reference(s) to Horch et al. . Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horch et al., hereinafter "Horch" (U.S. Patent No. 6,888,176 B1).

Regarding claims 1-2 and 27, Horch discloses a method f processing a semiconductor device comprising:

a plurality of memory cells, at least one of the memory cell (900, Fig. 6) comprising:

a thyristor (102A, Fig. 6); and

an electrode (74, Fig. 6) disposed over a region of the thyristor (102A, Fig. 6); and a bias circuit to bias the electrode (74, Fig. 6) with a voltage level to access the thyristor (74, Fig. 6).

Horch discloses all the features of the claimed invention as discussed above, but does not disclose the voltage level dependent on a temperature.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to modify the above discussed teaching of Horch by performing the voltage

level depend on the temperature since it was known in the art for a purpose of improving the process.

Allowable Subject Matter

3. Claims 8-11 would be allowed.

The following is a statement of reason for the indication of allowable subject matter:

Claim 8 is considered allowable since the prior art of record and the considered pertinent to the applicant's disclosure does not teach or suggest the thyristor comprising an anode/cathode, a cathode/anode, and first and second base regions disposed in contiguous series relationship between the anode/cathode and the cathode/anode, an electrode over one of the first and second base regions and operable under bias to affect an electric field, a temperature dependent bias circuit to bias the electrode with a voltage dependent on the temperature as cited in claim 8.

Claims 3-7 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

None of the prior art made of record does not disclose supporting material comprising at least one of semiconductor and conductor material; insulating material over the supporting material; the thyristor formed in a layer of silicon disposed over the insulating material; dielectric disposed between the electrode the layer of silicon; the bias circuit to define the voltage for the electrode relative to that of the supporting material as cited in claim 3 and a layer of silicon disposed in insulated relationship over a supporting substrate; the thyristor comprising N-P-N-P doped regions in the layer of silicon for respective cathode-emitter, P-bmse,

N-base and anode-emitter regions of the thyristor the electrode capacitively coupled to one of the N-base and P-base regions; and the bias circuit to adjust the bias of at least one of the electrode and the supporting substrate dependent on the temperature as cited in claim 4 and the bias circuit to influence a gain of a bipolar device of the thyristor dependent on the temperature as cited in claim 6 and a supporting substrate, and an insulating layer over the supporting substrate,' the thyristor comprises N-P-N-P doped regions in contiguous serial relationship in a layer of silicon over the insulating layer; the N-P-N and the P-N-P sequences of the thyristor representative of respective bipolar transistors,' and the means for setting the bias level is to establish an electric field through the base region between the eledrode and the supporting substrate, and to influence a gain of its respective one of the N-P-N and P-N-P bipolar transistors dependent on the temperature; the means for setting the bias level is operable to influence the gain of the bipolar transistor based on temperature an compensate for an intrinsic gain versus temperature dependency thereof as cited in claim 28.

Claims 5 and 7 are depend directly or indirectly on claims 4 and 6, then, they also would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

Conclusion

4. Applicants are advised to cancel the non-elected claims of Group II (claims 12-26) in response to the next Office action if the application is considered to be allowed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuc T. Dang whose telephone number is (571) 272-1776. The examiner can normally be reached on 8:00 am-5:00 pm.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and After Final communications.

7. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Phuc T. Dang PD

Primary Examiner

Art Unit 2818